

Supplemental Figure 4

CLUSTAL W (1.83) multiple sequence alignment

zfCobl	MNLGDATTRPPVGRRM KAQAPPPP RPPQPAPRRIFRNAVPDGGGSSGGDC
zfCobl+I1	MNLGDATTRPPVG-----
zfCobl+I7	MNLGDATTRPPVGRRM KAQAPPPP RPPQPAPRRIFRNAVPDGGGSSGGDC
zfCobl-E2	MNLGDATTRPPVG-----
zfCobl-E8	MNLGDATTRPPVGRRM KAQAPPPP RPPQPAPRRIFRNAVPDGGGSSGGDC
zfCobl-crypticE2	MNLGDATTRPPVG----- *****
zfCobl	KENMLRSYVDLHISLPTGYQTTINVDGRKALMDLLVDLCSQYHLNPAYHT
zfCobl+I1	-----
zfCobl+I7	KENMLRSYVDLHISLPTGYQTTINVDGRKALMDLLVDLCSQYHLNPAYHT
zfCobl-E2	-----KALMDLLVDLCSQYHLNPAYHT
zfCobl-E8	KENMLRSYVDLHISLPTGYQTTINVDGRKALMDLLVDLCSQYHLNPAYHT
zfCobl-crypticE2	-----LPTGYQTTINVDGRKALMDLLVDLCSQYHLNPAYHT
zfCobl	LELLSPDAQPVSFKPNALLGALDVSCALIKERVLEDRVIRKPPPKVPEKT
zfCobl+I1	-----
zfCobl+I7	LELLSPDAQPVSFKPNALLGALDVSCALIKERVLEDRVIRKPPPKVPEKT
zfCobl-E2	LELLSPDAQPVSFKPNALLGALDVSCALIKERVLEDRVIRKPPPKVPEKT
zfCobl-E8	LELLSPDAQPVSFKPNALLGALDVSCALIKERVLEDRVIRKPPPKVPEKT
zfCobl-crypticE2	LELLSPDAQPVSFKPNALLGALDVSCALIKERVLEDRVIRKPPPKVPEKT
zfCobl	VRLVVNYHRSQKAVVRVNPLAPLQTLVPVICQKCEFDPAHVLLFKDNINH
zfCobl+I1	-----
zfCobl+I7	VRLVVNYHRSQKAVVRVNPLAPLQTLVPVICQKCEFDPAHVLLFKDNINH
zfCobl-E2	VRLVVNYHRSQKAVVRVNPLAPLQTLVPVICQKCEFDPAHVLLFKDNINH
zfCobl-E8	VRLVVNYHRSQKAVVRVNPLAPLQTLVPVICQKCEFDPAHVLLFKDNINH
zfCobl-crypticE2	VRLVVNYHRSQKAVVRVNPLAPLQTLVPVICQKCEFDPAHVLLFKDNINH
zfCobl	QQLDLDKSLSDLGIRELVLDQTLAESLRNSNSLGSEKKGLGFLKFNRR
zfCobl+I1	-----
zfCobl+I7	QQLDLDKSLSDLGIRELVLDQTLAESLRNSNSLGSEKKGLGFLKFNRR
zfCobl-E2	QQLDLDKSLSDLGIRELVLDQTLAESLRNSNSLGSEKKGLGFLKFNRR
zfCobl-E8	QQLDLDKSLSDLGIRELVLDQTLAESLRNSNSLGSEKKGLGFLKFNRR
zfCobl-crypticE2	QQLDLDKSLSDLGIRELVLDQTLAESLRNSNSLGSEKKGLGFLKFNRR
zfCobl	KSKSEDQSENMESVDDDSVVDNADINSNGMSVVASGPCVEARPSTLGQS
zfCobl+I1	-----
zfCobl+I7	KSKSEDQSENMESVDDDSVVDNADINSNGMSVVASGPCVEARPSTLGQS
zfCobl-E2	KSKSEDQSENMESVDDDSVVDNADINSNGMSVVASGPCVEARPSTLGQS
zfCobl-E8	KSKSEDQSENMESVDDDSVVDNADINSNGMSVVASGPCVEARPSTLGQS
zfCobl-crypticE2	KSKSEDQSENMESVDDDSVVDNADINSNGMSVVASGPCVEARPSTLGQS

zfCobl	QSVMNISKMSPKVEL KKRRAPAPP PAPTQLPPTSQISLGSPSSHNL KK
zfCobl+I1	-----
zfCobl+I7	QSVMNISKMSPKVEL KKRRAPAPP PAPTQLPPTSQV-----
zfCobl-E2	QSVMNISKMSPKVEL KKRRAPAPP PAPTQLPPTSQISLGSPSSHNL KK
zfCobl-E8	QSVMNISKMSPKVEL KKRRAPAPP PAPTQLPPTSQLGY-----
zfCobl-crypticE2	QSVMNISKMSPKVEL KKRRAPAPP PAPTQLPPTSQISLGSPSSHNL KK

zfCobl	RKAPAPPPTPPPSTPEPDISTYVPTATVQEHYIPASVERTPRASTPADDS
zfCobl+I1	-----
zfCobl+I7	-----
zfCobl-E2	RKAPAPPPTPPPSTPEPDISTYVPTATVQEHYIPASVERTPRASTPADDS
zfCobl-E8	-----
zfCobl-crypticE2	RKAPAPPPTPPPSTPEPDISTYVPTATVQEHYIPASVERTPRASTPADDS

zfCobl	DLSHSIEDSEPARSICSSSGDDAAAVGSSSSLAEPVTHRADIAPFT
zfCobl+I1	-----
zfCobl+I7	-----
zfCobl-E2	DLSHSIEDSEPARSICSSSGDDAAAVGSSSSLAEPVTHRADIAPFT
zfCobl-E8	-----
zfCobl-crypticE2	DLSHSIEDSEPARSICSSSGDDAAAVGSSSSLAEPVTHRADIAPFT

zfCobl	TSTPEPEPKPEYEPELKKEASPRSTPELEPGPRPEVPAEDLEVEMELKM
zfCobl+I1	-----
zfCobl+I7	-----
zfCobl-E2	TSTPEPEPKPEYEPELKKEASPRSTPELEPGPRPEVPAEDLEVEMELKM
zfCobl-E8	-----
zfCobl-crypticE2	TSTPEPEPKPEYEPELKKEASPRSTPELEPGPRPEVPAEDLEVEMELKM

zfCobl	EETENNRHSGIAWLHSAHESVLERRVQQEVETVSVASSESFADHGYAASE
zfCobl+I1	-----
zfCobl+I7	-----
zfCobl-E2	EETENNRHSGIAWLHSAHESVLERRVQQEVETVSVASSESFADHGYAASE
zfCobl-E8	-----
zfCobl-crypticE2	EETENNRHSGIAWLHSAHESVLERRVQQEVETVSVASSESFADHGYAASE

zfCobl	DMAEESGPVSPSERMQSVSPMDIMSLNSDSTLPVKQSKESSSDSDEGCAT
zfCobl+I1	-----
zfCobl+I7	-----
zfCobl-E2	DMAEESGPVSPSERMQSVSPMDIMSLNSDSTLPVKQSKESSSDSDEGCAT
zfCobl-E8	-----
zfCobl-crypticE2	DMAEESGPVSPSERMQSVSPMDIMSLNSDSTLPVKQSKESSSDSDEGCAT

zfCobl	WGSRQSSGHIQDGQKSIKRONGYEEDPEITAQIHHTLADLDANLMNH
zfCobl+I1	-----
zfCobl+I7	-----
zfCobl-E2	WGSRQSSGHIQDGQKSIKRONGYEEDPEITAQIHHTLADLDANLMNH
zfCobl-E8	-----
zfCobl-crypticE2	WGSRQSSGHIQDGQKSIKRONGYEEDPEITAQIHHTLADLDANLMNH

zfCobl	DGASVFVDDIEPVSIIVMDIPVTAIDEVLDDDQCSASECESVLLRSTQSI
zfCobl+I1	-----
zfCobl+I7	-----
zfCobl-E2	DGASVFVDDIEPVSIIVMDIPVTAIDEVLDDDQCSASECESVLLRSTQSI
zfCobl-E8	-----
zfCobl-crypticE2	DGASVFVDDIEPVSIIVMDIPVTAIDEVLDDDQCSASECESVLLRSTQSI
zfCobl	SSQPCTPCGVIQNKNNAACLTEEKHRSPFPDIEKQLQTATLTVIDKPTIQ
zfCobl+I1	-----
zfCobl+I7	-----
zfCobl-E2	SSQPCTPCGVIQNKNNAACLTEEKHRSPFPDIEKQLQTATLTVIDKPTIQ
zfCobl-E8	-----
zfCobl-crypticE2	SSQPCTPCGVIQNKNNAACLTEEKHRSPFPDIEKQLQTATLTVIDKPTIQ
zfCobl	SPTSKKPSQDAKITDNMEQKTTFNSEAKSKSETVELTSQKDTVLQKSQSF
zfCobl+I1	-----
zfCobl+I7	-----
zfCobl-E2	SPTSKKPSQDAKITDNMEQKTTFNSEAKSKSETVELTSQKDTVLQKSQSF
zfCobl-E8	-----
zfCobl-crypticE2	SPTSKKPSQDAKITDNMEQKTTFNSEAKSKSETVELTSQKDTVLQKSQSF
zfCobl	VRPDVQSVQKERTSSTRVLPTQGKITLSSFSRGFMKTFVIPPKPAVSQT
zfCobl+I1	-----
zfCobl+I7	-----
zfCobl-E2	VRPDVQSVQKERTSSTRVLPTQGKITLSSFSRGFMKTFVIPPKPAVSQT
zfCobl-E8	-----
zfCobl-crypticE2	VRPDVQSVQKERTSSTRVLPTQGKITLSSFSRGFMKTFVIPPKPAVSQT
zfCobl	KPAGSLVTGAIKIDEQGNMVTQRQISSGPEKNNTPSVDTTRADKTPLVKA
zfCobl+I1	-----
zfCobl+I7	-----
zfCobl-E2	KPAGSLVTGAIKIDEQGNMVTQRQISSGPEKNNTPSVDTTRADKTPLVKA
zfCobl-E8	-----
zfCobl-crypticE2	KPAGSLVTGAIKIDEQGNMVTQRQISSGPEKNNTPSVDTTRADKTPLVKA
zfCobl	KAFWSTTEKQEKTAKTEPIVNNGDTDVFKASAVTGSFKLSPPEETHKE
zfCobl+I1	-----
zfCobl+I7	-----
zfCobl-E2	KAFWSTTEKQEKTAKTEPIVNNGDTDVFKASAVTGSFKLSPPEETHKE
zfCobl-E8	-----
zfCobl-crypticE2	KAFWSTTEKQEKTAKTEPIVNNGDTDVFKASAVTGSFKLSPPEETHKE
zfCobl	VIIVERKPISGVASKPSFSENHAEKRDLSFLIPSRRTSSQYVASVIAKNN
zfCobl+I1	-----
zfCobl+I7	-----
zfCobl-E2	VIIVERKPISGVASKPSFSENHAEKRDLSFLIPSRRTSSQYVASVIAKNN
zfCobl-E8	-----
zfCobl-crypticE2	VIIVERKPISGVASKPSFSENHAEKRDLSFLIPSRRTSSQYVASVIAKNN

zfCobl	KNSSIPKTKIDTPAPLSISGVQNPVNQLLNNEVKPTSIHKPAVTVKPTE
zfCobl+I1	-----
zfCobl+I7	-----
zfCobl-E2	KNSSIPKTKIDTPAPLSISGVQNPVNQLLNNEVKPTSIHKPAVTVKPTE
zfCobl-E8	-----
zfCobl-crypticE2	KNSSIPKTKIDTPAPLSISGVQNPVNQLLNNEVKPTSIHKPAVTVKPTE
zfCobl	NPVPSFRPKCLQSYYVAEKPTSSERISTLHGGRTKSLSQPLSIKIQPFP
zfCobl+I1	-----
zfCobl+I7	-----
zfCobl-E2	NPVPSFRPKCLQSYYVAEKPTSSERISTLHGGRTKSLSQPLSIKIQPFP
zfCobl-E8	-----
zfCobl-crypticE2	NPVPSFRPKCLQSYYVAEKPTSSERISTLHGGRTKSLSQPLSIKIQPFP
zfCobl	HVSCHKSFSEEATSINNFPDTSSARQTPTDTTHPPLAKKPELHKSEIPS
zfCobl+I1	-----
zfCobl+I7	-----
zfCobl-E2	HVSCHKSFSEEATSINNFPDTSSARQTPTDTTHPPLAKKPELHKSEIPS
zfCobl-E8	-----
zfCobl-crypticE2	HVSCHKSFSEEATSINNFPDTSSARQTPTDTTHPPLAKKPELHKSEIPS
zfCobl	EPNQGNVFGPVKKFKPVIFKPVQQETSIHSSLMEAIQSGEGIERLRKVSD
zfCobl+I1	-----
zfCobl+I7	-----
zfCobl-E2	EPNQGNVFGPVKKFKPVIFKPVQQETSIHSSLMEAIQSGEGIERLRKVSD
zfCobl-E8	-----
zfCobl-crypticE2	EPNQGNVFGPVKKFKPVIFKPVQQETSIHSSLMEAIQSGEGIERLRKVSD
zfCobl	LPTSCTVKKPSYNDPENERSALLSAIRASSTSALKKTKSVASKELEQLR
zfCobl+I1	-----
zfCobl+I7	-----
zfCobl-E2	LPTSCTVKKPSYNDPENERSALLSAIRASSTSALKKTKSVASKELEQLR
zfCobl-E8	-----
zfCobl-crypticE2	LPTSCTVKKPSYNDPENERSALLSAIRASSTSALKKTKSVASKELEQLR
zfCobl	KVEEDRNVHTEVISPRPTSPDFVPPLPPSFSPPPPPPPLAPAKPPVVL
zfCobl+I1	-----
zfCobl+I7	-----
zfCobl-E2	KVEEDRNVHTEVISPRPTSPDFVPPLPPSFSPPPPPPPLAPAKPPVVL
zfCobl-E8	-----
zfCobl-crypticE2	KVEEDRNVHTEVISPRPTSPDFVPPLPPSFSPPPPPPPLAPAKPPVVL
zfCobl	PGGNPEAAREALLEAIRSGSGAQRLRKVPVTQTRQVNGLGTIQATSPL
zfCobl+I1	-----
zfCobl+I7	-----
zfCobl-E2	PGGNPEAAREALLEAIRSGSGAQRLRKVPVTQTRQVNGLGTIQATSPL
zfCobl-E8	-----IQLTS--
zfCobl-crypticE2	PGGNPEAAREALLEAIRSGSGAQRLRKVPVTQTRQVNGLGTIQATSPL

zfCobl	SYGH
zfCobl+I1	----
zfCobl+I7	----
zfCobl-E2	SYGH
zfCobl-E8	--LC
zfCobl-crypticE2	SYGH